

CIO View Special

10 themes for the year ahead

October 13, 2025
Marketing material



Digitalization meets sustainability

Our digital future is going to need a lot more energy than people think

Technological progress is advancing rapidly, particularly in the fields of artificial intelligence (AI) and cryptocurrencies. Generative models, real-time analytics and blockchain applications are transforming the economy and society. But this digital transformation has an often-overlooked side effect: the significant increase in global electricity demand. The infrastructure supporting AI and cryptocurrencies, such as data centers, storage solutions and specialized chips, is becoming one of the world's largest energy consumers.

Data centers and crypto mining farms operate 24/7 to perform complex calculations and process transactions. The demands placed on cooling, security, and grid stability have been rising. This puts increasing pressure on power grids, which not only have to cope with continuous loads, but also have to respond flexibly to peaks. Meanwhile, the strategic importance of hardware suppliers is growing, particularly those providing security solutions for critical infrastructure, such as nuclear power plants and turbines. The availability of critical raw materials is becoming a geopolitical factor that may influence investment decisions.

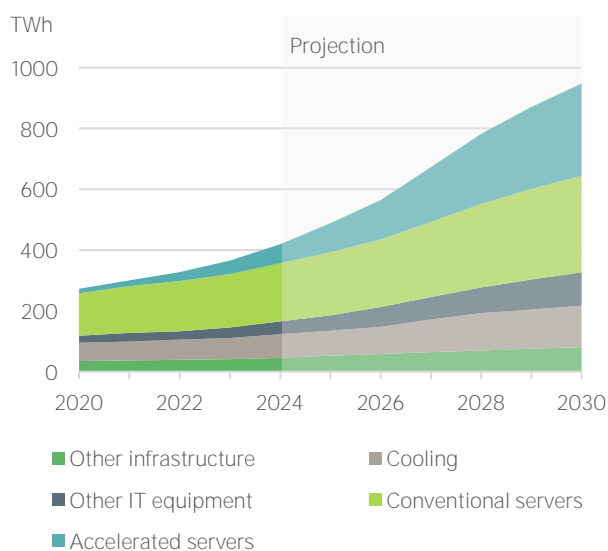
It is not just the digital world, however, that is increasing demand for energy. Electrification is also being shaped by the fact that generation and consumption are becoming modular and mobile. Electric vehicles, intelligent supply chains and automated production processes are just a few examples of this transformation. Germany is playing a pioneering role in technology and regulation. The ecological footprint of this development is complex. In addition to CO₂ emissions, factors such as water consumption for cooling and land use play a central role. Economic imperatives and political guidelines are behind the transformation, but social and environmental responsibility are also central to it. Sustainability has become an integral part of corporate planning globally and is also influencing how the electrification transformation is executed.

Innovations are needed to meet rising energy demand. Key solutions include renewable energies, liquid cooling and energy-efficient chip designs. Power supply chips and new grid technologies are helping to shape electricity distribution and usage. Regulatory frameworks and ESG-driven investment strategies are becoming increasingly important, particularly for the security of critical infrastructure and sustainable resource use. Scalability and long-term supply security are also coming increasingly into focus.

"Europe, and Germany in particular, appear well positioned in this transformation," says Olivier Souliac, Head Indexing at Xtrackers Products at DWS. "Large infrastructure programs and incentives for technological innovation are helping to lay the foundations for sustainable AI infrastructure, smart supply systems and the mobility of the future."

The race against time already began quite some time ago. Whether AI, cryptocurrencies and the electrification of the economy can be made transformative and sustainable is of central importance to the future viability of our society. In business and in politics, smart strategies, bold investments and an awareness of the hidden costs of progress remain critically important.

Global data center electricity consumption



Source: International Energy Agency as of April 2025

This information is subject to change at any time, based upon economic, market and other considerations and should not be construed as a recommendation. Past performance is not indicative of future returns. Forecasts are based on assumptions, estimates, opinions and hypothetical models that may prove to be incorrect. Alternative investments may be speculative and involve significant risks including illiquidity, heightened potential for loss and lack of transparency. Alternatives are not suitable for all clients. Source: DWS Investment GmbH.

Glossary

Artificial intelligence is the theory and development of computer systems able to perform tasks normally requiring human intelligence.

A **blockchain** is a chain of blocks of data that are immutably chained together via cryptography and stored on a distributed and decentralized database.

A **crypto asset** is the digital representation of a value or contractual right that is created, transferred, and stored using distributed ledger technology (blockchain) and authenticated through cryptography.

Investors increasingly take **environmental, social and governance (ESG)** criteria into account when analyzing companies in order to identify non-financial risks and opportunities.

A **generative model** is a machine learning model designed to create new data that is similar to its training data.

Mining is the process of creating valid new blocks containing transactions for proof-of-work based blockchains. To link a new block to the last one, a complex mathematical problem must be solved.

Important information – EMEA, APAC, LATAM & MENA

DWS is the brand name of DWS Group GmbH & Co. KGaA and its subsidiaries under which they do business. The DWS legal entities offering products or services are specified in the relevant documentation. DWS, through DWS Group GmbH & Co. KGaA, its affiliated companies and its officers and employees (collectively “DWS”) are communicating this document in good faith and on the following basis.

This document is for information/discussion purposes only and does not constitute an offer, recommendation or solicitation to conclude a transaction and should not be treated as investment advice.

This document is intended to be a marketing communication, not a financial analysis. Accordingly, it may not comply with legal obligations requiring the impartiality of financial analysis or prohibiting trading prior to the publication of a financial analysis.

This document contains forward looking statements. Forward looking statements include, but are not limited to assumptions, estimates, projections, opinions, models and hypothetical performance analysis. No representation or warranty is made by DWS as to the reasonableness or completeness of such forward looking statements. Past performance is no guarantee of future results.

The information contained in this document is obtained from sources believed to be reliable. DWS does not guarantee the accuracy, completeness or fairness of such information. All third party data is copyrighted by and proprietary to the provider. DWS has no obligation to update, modify or amend this document or to otherwise notify the recipient in the event that any matter stated herein, or any opinion, projection, forecast or estimate set forth herein, changes or subsequently becomes inaccurate.

Investments are subject to various risks. Detailed information on risks is contained in the relevant offering documents.

No liability for any error or omission is accepted by DWS. Opinions and estimates may be changed without notice and involve a number of assumptions which may not prove valid. DWS does not give taxation or legal advice.

This document may not be reproduced or circulated without DWS’s written authority.

This document is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction, including the United States, where such distribution, publication, availability or use would be contrary to law or regulation or which would subject DWS to any registration or licensing requirement within such jurisdiction not currently met within such jurisdiction. Persons into whose possession this document may come are required to inform themselves of, and to observe, such restrictions.

© 2025 DWS Investment GmbH

Issued in the UK by DWS Investments UK Limited which is authorised and regulated in the UK by the Financial Conduct Authority.
© 2025 DWS Investments UK Limited

In Hong Kong, this document is issued by DWS Investments Hong Kong Limited. The content of this document has not been reviewed by the Securities and Futures Commission.
© 2025 DWS Investments Hong Kong Limited

In Singapore, this document is issued by DWS Investments Singapore Limited. The content of this document has not been reviewed by the Monetary Authority of Singapore.
© 2025 DWS Investments Singapore Limited

In Australia, this document is issued by DWS Investments Australia Limited (ABN: 52 074 599 401) (AFSL 499640). The content of this document has not been reviewed by the Australian Securities and Investments Commission.
© 2025 DWS Investments Australia Limited

For institutional / professional investors in Taiwan:

This document is distributed to professional investors only and not others. Investing involves risk. The value of an investment and the income from it will fluctuate and investors may not get back the principal invested. Past performance is not indicative of future performance. This is

a marketing communication. It is for informational purposes only. This document does not constitute investment advice or a recommendation to buy, sell or hold any security and shall not be deemed an offer to sell or a solicitation of an offer to buy any security. The views and opinions expressed herein, which are subject to change without notice, are those of the issuer or its affiliated companies at the time of publication. Certain data used are derived from various sources believed to be reliable, but the accuracy or completeness of the data is not guaranteed and no liability is assumed for any direct or consequential losses arising from their use. The duplication, publication, extraction or transmission of the contents, irrespective of the form, is not permitted.

as of 10/6/25; 107676_1 (10/2025)

Important information – North America

The brand DWS represents DWS Group GmbH & Co. KGaA and any of its subsidiaries, such as DWS Distributors, Inc., which offers investment products, or DWS Investment Management Americas Inc. and RREEF America L.L.C., which offer advisory services.

Environmental, social, and governance (ESG) criteria are a set of standards for a company's operations that socially conscious investors use to screen potential investments: Environmental (how a company performs as a steward of nature); Social (how a company manages relationships with employees, suppliers, customers, and communities); Governance (company's leadership, executive pay, shareholder rights, etc.). Investing in securities that meet ESG criteria may result in foregoing otherwise attractive opportunities, which may result in underperformance when compared to products that do not consider ESG factors.

Companies involved in artificial intelligence and big data face intense competition, may have limited product lines, markets, financial resources and personnel. Artificial intelligence and big data companies are also subject to risks of new technologies and are heavily dependent on patents and intellectual property rights and the products of these companies may face obsolescence due to rapid technological developments. Any mentions of specific properties or securities are for illustrative purposes only and should not be considered a recommendation.

Cryptocurrencies and blockchain (the technology that supports crypto) have distinct risks that can include: the physical custody of cryptocurrency (theft, loss or destruction of key(s) to access the blockchain), lack of regulation, cybersecurity incidents, new and untested technology and its reliance on the Internet.

This document has been prepared without consideration of the investment needs, objectives or financial circumstances of any investor. Before making an investment decision, investors need to consider, with or without the assistance of an investment adviser, whether the investments and strategies described or provided by DWS, are appropriate, in light of their particular investment needs, objectives and financial circumstances. Furthermore, this document is for information/discussion purposes only and does not and is not intended to constitute an offer, recommendation or solicitation to conclude a transaction or the basis for any contract to purchase or sell any security, or other instrument, or for DWS to enter into or arrange any type of transaction as a consequence of any information contained herein and should not be treated as giving investment advice. DWS, including its subsidiaries and affiliates, does not provide legal, tax or accounting advice. This communication was prepared solely in connection with the promotion or marketing, to the extent permitted by applicable law, of the transaction or matter addressed herein, and was not intended or written to be used, and cannot be relied upon, by any taxpayer for the purposes of avoiding any U.S. federal tax penalties. The recipient of this communication should seek advice from an independent tax advisor regarding any tax matters addressed herein based on its particular circumstances. Investments with DWS are not guaranteed, unless specified. Although information in this document has been obtained from sources believed to be reliable, we do not guarantee its accuracy, completeness or fairness, and it should not be relied upon as such. All opinions and estimates herein, including forecast returns, reflect our judgment on the date of this report, are subject to change without notice and involve a number of assumptions which may not prove valid.

Investments are subject to various risks, including market fluctuations, regulatory change, counterparty risk, possible delays in repayment and loss of income and principal invested. The value of investments can fall as well as rise and you may not recover the amount originally invested at any point in time. Furthermore, substantial fluctuations of the value of the investment are possible even over short periods of time. Further, investment in international markets can be affected by a host of factors, including political or social conditions, diplomatic relations, limitations or removal of funds or assets or imposition of (or change in) exchange control or tax regulations in such markets. Additionally, investments denominated in an alternative currency will be subject to currency risk, changes in exchange rates which may have an adverse effect on the value, price or income of the investment. This document does not identify all the risks (direct and indirect) or other considerations which might be material to you when entering into a transaction. The terms of an investment may be exclusively subject to the detailed provisions, including risk considerations, contained in the Offering Documents. When making an investment decision, you should rely on the final documentation relating to the investment and not the summary contained in this document.

This publication contains forward looking statements. Forward looking statements include, but are not limited to assumptions, estimates, projections, opinions, models and hypothetical performance analysis. The forward looking statements expressed constitute the author's judgment as of the date of this material. Forward looking statements involve significant elements of subjective judgments and analyses and changes thereto and/or consideration of different or additional factors could have a material impact on the results indicated. Therefore, actual results may vary, perhaps materially, from the results contained herein. No representation or warranty is made by DWS as to the reasonableness or completeness of such forward looking statements or to any other financial information contained herein. We assume no responsibility to advise the recipients of this document with regard to changes in our views.

No assurance can be given that any investment described herein would yield favorable investment results or that the investment objectives will be achieved. Opinions expressed herein may differ from the opinions expressed by departments or other divisions or affiliates of DWS. This document may not be reproduced or circulated without our written authority. The manner of circulation and distribution of this document may be restricted by law or regulation in certain countries. This document is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction, including the United States, where such distribution, publication, availability or use would be contrary to law or regulation or which would subject DWS to any registration or licensing requirement within such jurisdiction not currently met within such jurisdiction. Persons into whose possession this document may come are required to inform themselves of, and to observe, such restrictions.

Past performance is no guarantee of future results; nothing contained herein shall constitute any representation or warranty as to future performance. Further information is available upon investor's request. All third party data (such as MSCI, S&P & Bloomberg) are copyrighted by and proprietary to the provider.

For Investors in Canada: No securities commission or similar authority in Canada has reviewed or in any way passed upon this document or the merits of the securities described herein and any representation to the contrary is an offence. This document is intended for discussion purposes only and does not create any legally binding obligations on the part of DWS Group. Without limitation, this document does not constitute an offer, an invitation to offer or a recommendation to enter into any transaction. When making an investment decision, you should rely solely on the final documentation relating to the transaction you are considering, and not the information contained herein. DWS Group is not acting as your financial adviser or in any other fiduciary capacity with respect to any transaction presented to you. Any transaction(s) or products(s) mentioned herein may not be appropriate for all investors and before entering into any transaction you should take steps to ensure that you fully understand such transaction(s) and have made an independent assessment of the appropriateness of the transaction(s) in the light of your own objectives and circumstances, including the possible risks and benefits of entering into such transaction. You should also consider seeking advice from your own advisers in making this assessment. If you decide to enter into a transaction with DWS Group you do so in reliance on your own judgment. The information contained in this document is based on material we believe to be reliable; however, we do not represent that it is accurate, current, complete, or error free. Assumptions, estimates and opinions contained in this document constitute our judgment as of the date of the document and are subject to change without notice. Any projections are based on a number of assumptions as to market conditions and there can be no guarantee that any projected results will be achieved. Past performance is not a guarantee of future results. The distribution of this document and availability of these products and services in certain jurisdictions may be restricted by law. You may not distribute this document, in whole or in part, without our express written permission.

For investors in Bermuda: This is not an offering of securities or interests in any product. Such securities may be offered or sold in Bermuda only in compliance with the provisions of the Investment Business Act of 2003 of Bermuda which regulates the sale of securities in Bermuda. Additionally, non-Bermudian persons (including companies) may not carry on or engage in any trade or business in Bermuda unless such persons are permitted to do so under applicable Bermuda legislation.

© 2025 DWS Investment GmbH, Mainzer Landstraße 11-17, 60329 Frankfurt am Main, Germany.
All rights reserved.

as of 10/6/25; 107677_1 (10/2025)